Available online at www.sciencedirect.com

SciVerse ScienceDirect

Procedia - Social and Behavioral Sciences 64 (2012) 437 – 446

Procedia
Social and Behavioral Sciences

INTERNATIONAL EDUCATIONAL TECHNOLOGY CONFERENCE
IETC2012

Use of Educational Materials in Slovenian Secondary Technical Education: The Perspectives of Teachers and Students

Damijan Štefanc[a*] and Jasna Mažgon[b]

[a, b]*University of Ljubljana, Faculty of Arts, Aškerčeva cesta 2, SI-1000 Ljubljana, Slovenia*

Abstract

In this paper we present some general didactic definitions of educational materials and emphasize that in relation to the teachers planning and conducting classes educational materials are educational means, in relation to pupils they are educational sources. The second part of the article presents some empirical findings from the research on the use of educational materials by the teachers and pupils of three programmes of secondary technical education in Slovenia. One of the key findings shows a pronouncedly marginal position of workbooks in Slovene secondary technical education: teachers and pupils only very rarely use them.

Keywords: educational materials; textbooks; workbooks; secondary technical education; didactic transformation and reduction;usageof materials

1. Introduction

Didactic or educational materials are undoubtedly one of the key factors which heavily influences the quality of any educational process, be it in elementary, secondary or tertiary education (cf. Ball & Cohen, 1996; House & Taylor, 2003;Chingos& Whitehurst, 2012;Kovač & Kovač Šebart, 2004). The reason for that is evident: among teachers, who play the most crucial role in every class, the transmission and gaining of knowledge significantly rely on educational media and textual media in particular. In didactic theory educational materials are mostly defined as the materials that teachers can use during educational

*Corresponding author. Tel.: +386 40 423 682; *E-mail address*: damijan.stefanc@ff.uni-lj.si

 doi:10.1016/j.sbspro.2012.11.052

process as *educational means*, whereas the pupils gaining or revising knowledge can use these materials as *educational sources*. In this manner, Oladejo, Ojosunde, Ojebisi&Isola (2011) emphasize that "instructional materials perform such functions as the extension of the range of experience available to learners, supplement and complement theteacher's verbal explanations thereby making learning experience richer and providing theteacher with interest into a wide variety of learning activities."(Ibid., p. 121)In addition, these are also the functions of instructional materials that encourage student's motivation for learning and their capabilities for self-regulated learning. According to Radovan, "students who self-regulate their learning have higher levelsof self-efficacy, are confident in their abilities (positive attributions) and more internally motivated." (Radovan, 2011, p. 216)

In the first part of this paper we will briefly discuss what makes *educational* materials different from other printed, electronic, art and similar materials which do not have the "status" of educational materials. The second part of the article will present some conclusions based on the empirical research into the use and characteristics of educational materials carried out by the Institute of the Republic of Slovenia for Vocational Education and Training on the sample of 370 teachers and 552 pupils of three programmes of secondary technical education (the economic technician, the mechanical technician, the health care programme).

2. Between scientific and educational contents: the necessity of appropriate didactic transformation and reduction

The specific difference between *educational* materials and other materials is the very consequence of the process of the didactic transformation and reduction of scientific and specialized contents. This process occurs so as to make the materials appropriately structured, rewritten and simplified. That is of significant importance due to the fact that educational materials, particularly textbooks, "are the main link of connection not only between the teacher and student, but also between what is called the purpose and effect, as they seek to translate the principles of a proposed curriculum – which is a translation of more general goals of education and a vision of science and technology – in content and activities that can be assimilated by students." (Cardoso, Cristiano and Arent, 2009, p. 2)

According to Strmčnik, one of the most renowned Slovenian theorists in the field of general didactics, didactic transformation and reduction occurs at three levels: (1) at the level of goals and objectives, (2) at the level of the scientific system, and (3) at the levels of educational contents (Strmčnik,2001, pp. 237–238). To a certain degree, this conclusion can be applied to the area of the preparation of educational materials as well. At the level of goals it has to be noted that science and the educational process do not share their intentions or goals. Science is primarily oriented towards new discoveries, facts, laws, etc. (in other words, the *production* of "the truth"). The main task of the school and the educational process, however, is *passing on* the already produced knowledge and *use* it to achieve educational goals.

Subsequently, *the didactic system is not a micro-model of the scientific system*, and *educational materials are likewise not micro-models of scientific studies*. The very transformation of the scientific system into the didactic one is the most sensitive, because it demands the so-called didactic reduction – i.e. the simplification, abridgement and selection of scientific contents, logic, terminology, methodology and suchlike. In other words, in spite of the demand for the didactic reduction and transformation, it remains necessary for educational contents to be structured and for pupils to see the logic of the relationships between ideas and concepts.

The didactically reduced and transformed scientific and professional contents in educational materials therefore have to avoid both traps: on the one hand, the trap of the automatic copying of the whole corpus of scientific and professional knowledge and structures into educational materials (e.g. textbooks), and on the other hand, the equally dangerous trap of inappropriate reduction, which could render educational

materials as educational sources for pupils non-functional. To put it otherwise: the performance of the formative function of educational materials depends on their being properly "informative" (i.e. possessing contents quality and richness). This of course importantly affects the usefulness of educational materials and consequently the decisions made by teachers and students whether they will choose a particular educational material for instruction and learning or not.

3. Some results of empirical study: how often do teachers and pupils use various didactic materials and what do they think of their usefulness?

In the spring of 2010, a survey by the Institute of the Republic of Slovenia for Vocational Education and Training was carried out among the pupils and teachers of three selected educational programmes in order to find out (a) how often they use various educational materials, (b) what they think of their usefulness, (c) what their opinions are about the availability and accessibility of various educational materials, and (d) whatthey think of the structural and content characteristics of the educational materials they come across during the processes of teaching and learning.

This article will only look into a selection of empirical data and relate some key findings associated with point (a) above, i.e. the *frequency of the use* of various educational materials.

3.1 Methodology

The descriptive and causal non-experimental method was used for the research. The data were gathered with a questionnaire, which mainly consisted of opinion scales and evaluation scales. The data are shown in frequency and structural tables, and the hypotheses were tested with the $\chi 2$ test. In cases when the conditions for the $\chi 2$ test were not fulfilled, the Kullback test was used. Certain variables, although ordinal in nature, were treated as interval variables, and arithmetic means were calculated for them.

3.2 Sample

The questionnaire on the characteristics and use of educational materials was completed by 370 teachers (29.6 % men and 70.4 % women) and 552 pupils (50.4 % boys and 49.6 % girls).

The sample included teachers working in the programmes of *themechanical technician* (37.5 % of those participating), of *health care* (32.3 %) and of *theeconomic technician* (30.2 %). The teachers surveyed had an average of 15.12 years of working experience; those with less than six years of experience amounted to 13.5 %, those with six to fifteen years of working experience totalled 42.1 %, and the rest had more than fifteen years of experience.

The *sample of pupils* also included the pupils from the aforementioned educational programmes (the majority, 40.8 %, attended the programme of *health care*, 32.2 % that of *the mechanical technician* and 27.0 % the programme of *the economic technician*). The majority of the pupils filling in the questionnaire (62.3 %) attended the third and fourth years of educational programmes, which can lead us to presume that they were quite experienced as regards secondary-school educational materials.

4. The use of didactic materials: teacher's and pupil's perspectives

The first question put to the teachers and pupils of the three programmes of secondary technical education by our survey was how often they really used various educational materials (textbooks,

workbooks, collections of exercises, worksheets, e-materials available on digital media and online, their own notes, etc.). The teachers described how often[1] they used educational materials when planning and conducting classes, whereas the pupils answered the question of how often they used the materials for general education courses, for technical courses and for their independent learning at home.

The frequency of the use of materials is a piece of information that can help us draw not only a conclusion on the availability and accessibility of various materials on the market of educational materials, but also – at least indirectly – on their professional adequacy and quality. We do presuppose, namely, that teachers choose such materials during their preparation and teaching which they believe will substantially help them reach educational goals and knowledge standards. The same is supposedly true of the choices made by pupils for their independent learning activities.

4.1 When planning and conducting classes teachers most often rely on the didactic materials prepared by themselves

The great majority of the teachers surveyed – i.e. over 80% – report often or very often using their own notes (85.2%), textbooks (81.7%) and worksheets/handouts prepared by themselves (80.5%). The average grade of the frequency of the use of these materials (Table 1) is over 3.0, which is relatively high for an average grade – given the scale ranges from one to four.

Table 1: The use of educational materials when planning and conducting classes

During classes I use:	**M**
My own notes	**3.29**
Textbooks	3.28
Worksheets/handouts prepared by myself	3.13
E-materials on digital media (e.g. USB, compact discs, memory discs)	2.44
Collections of exercises	2.41
Other	2.41
E-materials accessed online during classes	2.30
Workbooks	2.23

Topping the list are *teachers' own notes*, which is not particularly surprising: it is probably difficult to imagine a teacher whose notes (prepared on the basis of a variety of available sources) would not serve him/her as important material when planning and conducting classes. It is, however, worthwhile to note an interesting trend: the research shows that the frequency of the use of one's own notes statistically significantly depends on the years of one's working experience. Although we might be drawn to think the opposite, the data show that the less experience teachers have, the greater their share reporting often or very often using notes (see Table 2).

Table 2: The frequency of the use of one's own notes when planning and conducting classes, in relation to the length of teachers' working experience ($2\hat{I}= 24.024$, $\alpha = 0.004$)

Years of	**Total**

[1] On the four-point ordinal scale: *never – rarely – often – very often*.

working experience	Frequency of the use of one's own notes									
	Very often		Often		Rarely		Never			
	f	f%	f	f%	f	f%	f	f%	f	f%
Up to 5 years	25	52.1	18	37.5	4	8.3	1	2.1	**48**	**100,0**
From 6 to 15 years	82	55.4	46	31.1	19	12.8	1	0.7	**148**	**100,0**
From 16 to 25 years	38	36.9	51	49.5	11	10.7	3	2.9	**103**	**100,0**
From 26 to 36 years	19	39.6	16	33.3	7	14.6	6	12.5	**48**	**100,0**
Total	**164**	**47.3**	**131**	**37.8**	**41**	**11.8**	**11**	**3.2**	**347**	**100,0**

A possible explanation would be that the teachers with the most working experience – as opposed to their younger colleagues – no longer rely so heavily on their notes as they carry out their classes more routinely and do not feel they should prepare so thoroughly for each lesson. Hence, they do not really need their notes during classes anymore.

As for the use of textbooks, the high average grade does not really surprise. Teachers are expected they will regularly rely on textbooks made to match curricula and approved by the responsible council of experts, thus being a good orientation point for a lot of teachers when planning and carrying out their classes. Consequently, the percentage of those claiming to use textbooks rarely or not at all does seem relatively high (18.3 %). Statistically significant differences between the sexes should also not be overlooked: the data reveal that a substantially bigger share of male teachers say that they only rarely or even never use textbooks. The share of female teachers claiming this is 13.9 %, whereas the share of male teachers is almost 30 % (see Table 3).

Table 3: The frequency of the use of textbooks when planning and conducting classes, in relation to the teachers' sex ($\chi^2 = 28.571$; $\alpha = 0.000$)

Sex	Frequency of the use of textbooks								Total	
	Very often		Often		Rarely		Never			
	f	f%	f	f%	f	f%	f	f%	f	f%
Female	153	60.5	65	25.7	28	11.1	7	2.8	253	100,0
Male	32	30.5	43	41.0	21	20.0	9	8.6	105	100,0
Total	185	51.7	108	30.2	49	13.7	16	4.5	358	100,0

In other words, nearly every third male teacher working in the programmes of health care, the mechanical technician and the economic technician only rarely or even never uses textbooks when planning and conducting classes. It is difficult to speculate on the reasons for this without any further empirical data to provide us with the insights into the background of this phenomenon – possibly more male teachers teach the courses that do not have appropriate textbooks or maybe there are fewer available or perhaps, according to these teachers, they lack quality and so they use them less often.

A very large share of teachers (80.0 %) often or very often use worksheets/handouts prepared by themselves. On the one hand this is positive – if it shows that teachers employ their professional autonomy by preparing their own materials, which could mean that (remembering the well-known Apple's thesis) they do not agree to any separation between conceptualization and performance (cf. Apple, 2003). However, there is another, less encouraging interpretative possibility: perhaps there are not enough stimulating educational materials available beside textbooks that teachers could choose to use during classes; or if they do exist, teachers cannot make them obligatory for pupils – this is especially true

of workbooks, collections of exercises and suchlike that teachers cannot really expect all pupils to bring to classes (these materials are not subject to approval by councils of experts and are thus equivalent to any other printed product on the market). One of the more surprising findings of the research is the fact that more than one third of the teachers surveyed (34.4 %) *never* use workbooks when planning and conducting classes. Together with those reporting a rare use of workbooks, the share reaches almost 60 %.

Table 4: The frequency of the use of workbooks when planning and conducting classes, in relation to the teachers' sex ($\chi^2 = 20.695$, $\alpha = 0.000$)

Sex	Frequency of the use of workbooks								Total	
	Very often		Often		Rarely		Never			
	f	f%	f	f%	f	f%	f	f%	f	f%
Female	53	21.9	63	26.0	49	20.2	77	31.8	**242**	**100,0**
Male	7	6.8	17	16.5	36	35.0	43	41.7	**103**	**100,0**
Total	**60**	**17.4**	**80**	**23.2**	**85**	**24.6**	**120**	**34.8**	**345**	**100,0**

One of the possible reasons for such a substantial share of teachers not using workbooks could simply be the non-existence of workbooks for the courses they teach. Namely, when teachers were asked what educational materials were lacking, a good 35 % said it was workbooks – the share being the same as the share of those never using workbooks. Nonetheless, we should not jump to conclusions: if there are too few workbooks (which is what 35 % of teachers claim), it does not mean that there are none. It can only mean that according to the teachers there are *not enough*. It is, nevertheless, obvious that almost two thirds of teachers remain unconvinced by the workbooks available on the market, and so they refuse to use them more often when planning and conducting classes. The reasons behind this seem quite important and should be analyzed in more depth.

In line with expectations, our research shows that teachers use electronic materials (in particular e-materials accessed online) less often. 39.6 % of the respondents said they often or very often use web materials, and 34.4 % of the teachers surveyed said they often or very often use e-materials available on digital media (CDs, memory disks, etc.). The lower frequency of the use is not really surprising here, and there are a couple of reasons that can explain it: e-materials are still not widely available (despite all the efforts channelled into them in recent years), but most of all the problem lies in insufficient technical equipment – not only all classrooms, but also most of (if not all) the desks in them should be properly equipped. If teachers were to be encouraged to use e-materials more frequently during classes, pupils should also have access to them, just as is the case with printed materials.

5. Pupils most often use their own notes and didactic materials, prepared by teachers

The pupils surveyed were asked a couple of questions about:

(a) how often they use specific educational materials for general education courses (i.e. the courses that are by and large the same for all educational programmes and are not related to the specifics of the various professions or occupations they are being educated for; these include mathematics, Slovene, foreign languages, etc.),
(b) how often they use specific educational materials for technical courses (specific to the educational programmes they attend), and
(c) how often they use specific educational materials for independent learning at home.

Like teachers, pupils also used the four-point ordinal scale to answer the questions.[2] Their answers are shown in Tables 5, 6 and 7.

Table 5: The use of educational materials for general education courses (pupils' answers)

For general education courses we use:	4		3		2		1		Total	
	f	f%	f	f%	f	f%	f	f%	f	f%
Our own notes	**313**	**57.1**	123	22.4	76	13.9	36	6.6	548	100,0
Worksheets/handouts prepared by teachers	156	28.5	280	51.2	98	17.9	13	2.4	547	100,0
Textbooks	47	8.6	236	43.1	245	44.8	19	3.5	547	100,0
Collections of exercises	22	4.1	92	17.1	252	46.8	172	32.0	538	100,0
E-materials on digital media (e.g. CD-ROMs, memory discs)	17	3.1	103	18.9	227	41.6	199	36.4	546	100,0
E-materials accessed online during classes	13	2.4	52	9.6	242	44.6	**236**	**43.5**	543	100,0
Workbooks	12	2.2	89	16.2	306	55.8	141	25.7	548	100,0
Other	7	4.4	29	18.4	43	27.2	79	50.0	158	100,0

Table 6: The use of educational materials for technical courses (pupils' answers)

For technical courses we use:	4		3		2		1		Total	
	f	f%	f	f%	f	f%	f	f%	f	f%
Our own notes	**298**	**54.7**	129	23.7	77	14.1	41	7.5	545	100,0
Worksheets/handouts prepared by teachers	144	26.3	214	39.1	145	26.5	44	8.0	547	100,0
Textbooks	93	17.0	199	36.4	198	36.3	56	10.3	546	100,0
Collections of exercises	37	6.9	100	18.6	228	42.3	174	32.3	539	100,0
E-materials on digital media (e.g. CD-ROMs, memory discs)	31	5.7	115	21.1	176	32.2	224	41.0	546	100,0
E-materials accessed online during classes	26	4.8	74	13.5	214	39.1	**233**	**42.6**	547	100,0

[2] When talking about the frequency of the use of educational materials for general education and technical courses, the values were given as the following variables: *for no course – for rare courses – for most courses – for all courses*. When giving answers about the frequency of the use of educational materials at home, the variables were *never – rarely – often – very often*.

Workbooks	14	2.6	78	14.3	230	42.3	222	40.8	544	100,0
Other	11	7.0	29	18.4	41	25.9	77	48.7	158	100,0

Table 7: The use of educational materials for independent learning at home (pupils' answers)[3]

For independent learning	**4**		**3**		**2**		**1**		**Total**	
at home I use:	**f**	**f%**	**f**	**f%**	**f**	**f%**	**f**	**f%**	**f**	**f%**
My own notes	**394**	**71.9**	83	15.1	50	9.1	21	3.8	548	100,0
Worksheets/handouts prepared by teachers	171	31.1	231	42.1	108	19.7	39	7.1	549	100,0
Textbooks	78	14.2	153	27.9	231	42.1	87	15.8	549	100,0
Collections of exercises	64	11.8	145	26.7	176	32.4	158	29.1	543	100,0
E-materials accessed online during classes	53	9.7	108	19.7	170	31.0	217	39.6	548	100,0
E-materials on digital media (e.g. CD-ROMs, memory discs)	18	3.3	53	9.7	157	28.6	**321**	**58.5**	549	100,0
Other	18	11.1	28	17.3	29	17.9	87	53.7	162	100,0
Workbooks	14	2.6	64	11.7	238	43.4	232	42.3	548	100,0

When discussing the use of educational materials by pupils, pupils' own notes and the *worksheets/handouts prepared by teachers* stand out. The frequency of the use of worksheets increases in importance when compared to the frequency of the use of textbooks: 51.7 % report that the latter are used for all or most general education courses, 53.4 % claim the same as regards technical courses, whereas fewer than half of pupils (42.1 %) often or very often use textbooks when learning independently at home. These data unambiguously show the need to reconsider seriously how to encourage pupils to use textbooks as a source for independent learning more.

While our data still show a relatively frequent use of textbooks by pupils, the data on the use of workbooks turns out to be very discouraging: similarly to the answers given by teachers, pupils report only rarely or never using workbooks. 85.7 % said this when asked about the use of workbooks when learning independently at home – 43.4 % said that they rarely use workbooks, and 42.3 % that they never use them at all. Similar answers were given to the question of how many courses they use workbooks for. Over 80 % report using workbooks for rare or even no general education or technical courses. Acquiring quality knowledge requires an active and varied use of educational materials, which makes these data alarming. Pupils use e-materials and collections of exercises just as rarely as workbooks – the share of those reporting often or very often using these materials for most or all courses is – as a rule – around 20 %, only exceptionally is the share bigger. It should not be overlooked that pupils – both during classes and for independent learning at home – use collections of exercises significantly more often than workbooks.

Finally, we should point to an indicative trend related to the use of e-materials: when pupils were asked about the frequency of the use of e-materials on digital media and those available online during classes in general education and technical courses, we found out that it is more common to use e-materials on digital media during classes – approximately one quarter of pupils claim using such materials for most or all technical or general education courses. In opposition, only 12 % of pupils report the same use of e-materials accessible online for general education courses, and 18.6 % report such use for

[3] Pupils graded the use with the grades from 1 to 4; 1 – I never use them, 2 – I rarely use them, 3 – I often use them, 4 – I very often use them.

technical courses. The percentages are relatively low, especially since considerable efforts have gone into the so-called "informatisation" of schools in Slovenia since the mid-1990s. But when pupils are asked what e-materials they use more often when learning independently at home, the data demonstrate a reverse picture: almost one third say they often or very often use materials that can be accessed online, whereas only 13.0 % report the same regarding e-materials on digital media. In other words, pupils rely much more on online materials when learning independently, and they do not use preloaded applications on memory disks as much.

5.1. More frequent the use of a particular educational material is at school, the more often pupils will use the same material when learning independently at home

The research also asked how the use of various educational materials during classes in general education and in technical courses affects the frequency of the use of the same materials during pupils' independent learning at home. Crosstabulations undoubtedly reveal that the more frequent the use of a particular educational material is at school, the more often pupils will use the same material when learning independently at home (Table 8).

Table 8: The use of workbooks for classes in technical courses and for independent learning at home ($2\hat{I}$= 109.578, α = 0.000)

Use of workbooks for classes in technical courses	**Use of workbooks for independent learning at home**								**Total**	
	I very often use them		**I often use them**		**I rarely use them**		**I never use them**			
	f	**f%**	**f**	**f%**	**f**	**f%**	**f**	**f%**	**f**	**f%**
We use them for no technical course	4	1.8	12	5.4	61	27.6	144	65.2	**221**	**100,0**
We use them for rare technical courses	4	1.7	26	11.4	124	54.1	75	32.8	**229**	**100,0**
We use them for most technical courses	3	3.8	22	28.2	44	56.4	9	11.5	**78**	**100,0**
We use them for all technical courses	1	7.7	4	30.8	7	53.8	1	7.7	**13**	**100,0**
Total	**12**	**2.2**	**64**	**11.8**	**236**	**43.6**	**229**	**42.3**	**541**	**100,0**

Among the pupils saying they never use workbooks for any technical course at school, only 7.2 % say they often or very often use them at home. Among the pupils reporting the use of workbooks for all or most technical courses, on the other hand, as many as one third (33.0%) often or very often use workbooks at home.

The above-mentioned data lead to a trivial, but no less important conclusion. Having asked ourselves how to encourage a more frequent use of various educational materials with pupils, we have now come across an important part of the answer that is as clear as day: teachers should be encouraged to use them more frequently during classes in the first place. If teachers use a small variety of educational materials, pupils will use accordingly limited varieties at home as well. Or, to put it otherwise: a teacher relying exclusively on his/her own notes cannot really expect the majority of pupils to reach for other educational materials when learning at home, even if such materials are available and of good quality. At the level of providing appropriate technical and infrastructural solutions – which is the school's founder's responsibility – the figures convey a significant message: the frequency of the use of modern e-materials during independent learning at home is closely dependent on the frequency of their use during school classes.

6. Conclusion: the process of an effective implementation of educational materials in education is far from finished

This article presents some key findings from the research on the use of educational materials by the teachers and pupils of three programmes of secondary technical education in Slovenia. The data do point to some clear trends that cannot remain unnoticed. One of the key findings shows a pronouncedly marginal position of workbooks in Slovene secondary technical education: teachers and pupils only very rarely use them. The fact that teachers rarely or never use workbooks during classes has an important influence on pupils' use of them during independent learning at home – their use is just as limited as their teachers'. The use of e-materials is similarly limited, even though the reasons for it differ from those regarding workbooks. Both phenomena clearly show that the process of an effective implementation of educational materials in education is far from finished. At the systemic and professional levels, the enquiries into how to contribute to a better quality of pupils' knowledge through high-quality educational materials remain as relevant and necessary as ever.

References

Apple, M. W. (2003). Is the New Technology Part of the Solution or Part of the Problem in Education? In A. Darder, R. D. Torres, & M. Baltodano (Eds.). *The Critical Pedagogy Reader* (pp. 440-458). New York / London: RoutledgeFalmer.

Ball, D. L., & Cohen, D. K. (1996). Reform by the book: What Is or might be the role of curriculum materials in teacher learning and instructional reform? *EducationalResearcher,* 25(9), 6–14.

Cardoso, D. C., Cristiano, M. P., & Arent, C. O. (2009). Development of New Didactic Materials for Teaching Science and Biology: The Importance of the New Education Practices. *OnLine Journal of Biological Sciences*, 9(1), 1-5.

Chingos, M. M. & Whitehurst, G. J. (2012). *Choosing Blindly: Instructional Materials, Teacher Effectiveness, and the Common Core.*Washington: The Brookings Institution.

House, J. E., & Taylor, R. T. (2003). Leverage on learning: Test scores, textbooks, and publishers. *Phi Delta Kappan,* 84(7), 537–541.

Kovač, M., & Kovač Šebart, M. (2004). Where East Meets West: Controversies Of Textbook Publishing In Small Former Communist Countries. *Publ. Res. Q.*, 20(3), 40-51.

Oladejo, M. A., Olosunde, G. R., Ojebisi, A. O., Isola, O. M. (2011). Instructional Materials and Students'Academic Achievement in Physics: Some Policy Implications. *European Journal of Humanities and Social Sciences*, 1(2), 112-126.

Radovan, M. (2011). The Relation between Distance Students' Motivation, their Use of Learning Strategies, and Academic Success. *The Turkish Online Journal of Educational Technology*, 10(1), 216–222.

Strmčnik, F. (2001). *Didaktika: Osrednje teoretične teme. (Didactics: Main Theoretical Issues).* Ljubljana: Scientific Institute of Faculty of Arts.